

# Frederick Emmons Terman, <sup>uuu</sup>

## Stanford Engineer, Dies at 82

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By WOLFGANG SAXON

Dr. Frederick Emmons Terman, vice president and provost emeritus of Stanford University, a champion of excellence in the training of scientists and engineers and a force behind northern California's electronics industry, died Sunday at his home on the university's Palo Alto campus at the age of 82. He died of heart failure after several years of declining health, the university said.

Dr. Terman joined Stanford's electrical engineering department in 1925 after receiving his doctorate in that field at the Massachusetts Institute of Technology. Until his retirement 40 years later, he worked as a researcher, teacher, textbook author and administrator to build up an electronics program that made Stanford a well of ideas, experts and books.

He also played a key role in setting up the Stanford Industrial Park next to the university in 1951 and encouraged his graduate students to set up shop in what became the "Silicon Valley" electronics belt. Among those who did so were Bill Hewlett and David Packard, the founders of the Hewlett-Packard Company.

For his contributions to the creation of modern electronics, President Ford awarded Dr. Terman the National Medal of Science in 1976. The following year, Stanford dedicated its new Terman Engineering Center to him.

In World War II, Dr. Terman organized and directed the Radio Research Laboratory at Harvard University, a large-scale program to develop reconnaissance equipment and devices to foil enemy radar. His work earned him the United States Medal for Merit in 1948.

### Dean of Engineering in 1945

Dr. Terman's wartime efforts led him to promote close ties for government, universities and industry, in areas such as the use of television to link classrooms with local companies. His successes in that respect became a factor in Stanford's move toward international prominence in electrical engineering. He was named dean of Stanford's School of Engineering in 1945.

He was elected to the National Academy of Sciences in 1946 and was a founding member of the National Academy of Engineering.

Dr. Terman's tenure as dean of engi-

neering lasted until 1958. From 1955 until 1965 he served as the university's provost, its second-ranking academic officer.

Dr. Terman was born June 7, 1900, in English, Ind. His father was the psychologist Lewis M. Terman, known for his work with intelligence testing and studies of gifted children.

Surviving Dr. Terman are his three sons, Frederick, of Carmel, Calif.; Terence, of Mountain View, Calif., and Lewis, of South Salem, N.Y., and five grandchildren.

## Dr. Richard Marshak, Radiologist and Teacher

Dr. Richard H. Marshak, a clinical professor of radiology and attending radiologist at the Mount Sinai Medical Center, died of a heart attack Monday at Lenox Hill Hospital. He was 70 years old and lived in Manhattan.

Dr. Marshak joined Mount Sinai in 1940 to work with Dr. Burrill Crohn, who first described the chronic inflammation of the intestinal tract that became known as Crohn's disease. Dr. Marshak died just before publication of the last in a series of books he had written on gastrointestinal diseases.

Dr. Marshak helped found the Health Insurance Plan, and pressed for the availability of medicine to everyone.

He was this year's recipient of the Townsend Harris medal, given by the Alumni Association of the City College for outstanding achievement. He also received the Gold Medal Award from the Radiological Society of North America for distinction as an author, scholar, teacher and scientist.

Dr. Marshak was past president of the New York Academy of Gastroenterology, the New York Roentgen Society, the Society of Gastrointestinal Radiology and the American College of Gastroenterology.

He is survived by a son, Robert, of Manhattan.

**DO NOT FORGET THE NEEDIEST**